

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) A method comprising:
at a device, opening a first connection to a server;
establishing an information exchange protocol for
communicating on the first connection;
at a device, opening a second connection to the server;
selecting, from connections including the second
connection, at least one [[a]] connection to be an active
connection and other connections as passive connections; [[and]]
communicating information [[]] via the active connection
using [[the]] an information exchange protocol ~~established for~~
based on a type of the first active connection; and
monitoring a predetermined set of parameters corresponding
to one or more characteristics of the active and passive
connections to determine whether to
open one or more additional connections;
close one or more of the opened connections; and
change the selected active connection as a passive
connection and select one or more of the passive connections as
the active connection.

2. (original) The method of claim 1 further comprising communicating information configured for the information exchange protocol using the first connection as the active connection prior to selecting the second connection as the active connection.

3. (original) The method of claim 1 in which the second connection is opened prior to establishing the information exchange protocol.

4. (original) The method of claim 1 in which a single one of the connections is selected as the active connection.

5. (previously presented) The method of claim 1 in which two or more connections are selected as the active connection.

6. (original) The method of claim 1 in which the second connection includes a wireless connection.

7. (currently amended) A method comprising:
at a device, opening a first connection to a server;
establishing an information exchange protocol for
communicating on the first connection based on a type of the first connection;

at the device, opening a second connection to the server;
selecting from the opened connections including the second connection, one or more ~~[[a]] connections~~ to be an active connection;

communicating information configured for ~~[[the]] an~~
information exchange protocol, ~~that was established for the~~

~~first connection, using~~ corresponding to a type of the active connection; and

monitoring the opened connections for [[a]]one or more parameters selected from [[the]]a group consisting of transmittal rate, latency, and cost of transmittal; and

based on the monitored one or more parameters, determining whether to

open one or more additional connections;

reselect[[ing]] the active connection to optimize the monitored one or more parameters; and

close one or more additional connections.

8. (original) The method of claim 1 in which the information is communicated in packets that include aggregated information for more than one application.

9. (original) The method of claim 1, 4, or 6 in which the information includes a command that is effected by a module on the server.

10.. (previously presented) The method of claim 8 in which the extent of aggregation for each application in the packets that include aggregated information for more than one application is dependent on an indicator of priority for information exchange associated with each application.

Applicant : Frederick William Strahm et al.
Serial No.: 09/811,161
Filed : March 16, 2001
Page : 5 of 22

Attorney's Docket No.: 10559-
423001 / P10437

11. (previously presented) A method comprising:
at a device, opening a first connection to a server;
establishing an information exchange protocol for
communicating on the first connection based on a type of the
first connection;
at the device, opening a second connection to the server;
selecting, from the opened connections including the second
connection, one or more [[a]] connections to be an active
connection; [[and]]
communicating information configured for the information
exchange protocol [[]], that was established for the first
connection, using the active connection, the information
comprising a command that causes the server to contact a remote
system, receive a reply from the remote system, and effect a
response without transmitting the reply to the device; and
monitoring a predetermined set of parameters corresponding
to one or more characteristics of the opened connections to
determine whether to
open one or more additional connections;
close one or more of the opened connections; and
change the selected active connection as a passive
connection and select one or more of the passive connections as
the active connection.

12-18. (cancelled)

19. (currently amended) An apparatus comprising a
processor and software configured to cause the processor to:
open a first connection to a server;
establish an information exchange protocol;

open a second connection to a server;
select from connections including the second connection,
one or more[[a]] connections to be an active connection;[[and]]
communicate information via the active connection using the
information exchange protocol [[]]established for the first
connection; and
monitor a predetermined set of parameters corresponding to
one or more characteristics of the opened connections to
determine whether to
open one or more additional connections;
close one or more of the opened connections; and
change the selected active connection as a passive
connection and select one or more of the passive connections as
the active connection.

20. (original) The apparatus of claim 19 in which the processor is further configured to monitor the connections for a parameter selected from the group consisting of signal strength, transmittal rate, latency, cost of transmittal, and connection integrity; and

reselect the active connection to optimize the parameter.

21. (original) The apparatus of claim 19 in which the information is communicated in packets, each of at least some of the packets includes aggregated information for different local applications.

22. (original) The apparatus of claim 19 in which the information includes commands that are effected by a module on the server.

23. (currently amended) An article comprising a machine-readable medium that stores machine-executable instructions, the instructions causing a machine to:

communicate information via the active connection using the information exchange protocol established for the first connection; and

open one or more additional connections;
close one or more of the opened connections; and
change the selected active connection as a passive
connection and select one or more of the passive connections as
the active connection.

25. (original) The article of claim 23 in which the instructions further cause the machine to monitor the connections for a parameter selected from the group consisting of signal strength, transmittal rate, latency, cost of transmittal, and connection integrity; and

26. (original) The article of claim 23 in which the information is communicated in packets, each of at least some of the packets includes aggregated information for different local applications.

27. (original) The article of claim 23 in which the information includes commands that are effected by a module on the server.

28. (currently amended) A system comprising:
a device, a server, and communication links, in which the device is configured to:

- open a first connection to the server using one of the communication links;
- establish an information exchange protocol;
- open a second connection to the server using another of the communication links;
- select from the opened connections including the second connection, one or more [a] connections to be an active connection;
- communicate information [] via the active connection using the information exchange protocol established for the first connection; and
- monitor a predetermined set of parameters corresponding to one or more characteristics of the opened connections to determine whether to
 - open one or more additional connections;
 - close one or more of the opened connections; and
 - change the selected active connection as a passive

connection and select one or more of the passive connections as the active connection.

29. (original) The system of claim 28 in which at least one of the communication links includes a wireless communication link.

30. (previously presented) The system of claim 28 in which the device is further configured to monitor the connections for a parameter selected from the group consisting of signal strength, transmittal rate, latency, cost of transmittal, and connection integrity; and

reselect the active connection to optimize the parameter.

31. (previously presented) The system of claim 28 in which the device is further configured to select, from the connections, a connection to be a passive connection.

32. (previously presented) The system of claim 31 in which the passive connection is maintained while at least some of the information is communicated using the active connection.

33. - 37. (cancelled)

38. (previously presented) The method of claim 1 in which the device compares its geographic position to the range of one of the connections.

39. (previously presented) The method of claim 1 in which the device retains outgoing information until reception is acknowledged.

40. (previously presented) The method of claim 39 in which the device monitors a buffer that retains outgoing information to determine whether to transmit additional outgoing information.

41. (previously presented) The method of claim 1 in which the device implements software-based application sockets to connect application input/output streams to the server.

42. (previously presented) The method of claim 7 in which the parameter comprises transmittal rate.

43. (previously presented) The method of claim 7 in which the parameter comprises latency.

44. (previously presented) The method of claim 7 in which the parameter comprises cost of transmittal.

45. (currently amended) A method comprising:
at a device, opening a first connection to a server;
establishing an information exchange protocol for
communicating on the first connection;
at a device, opening a second connection to the server;
selecting, from connections including the second
connection, one or more[[a]] connections to be an active
connection and another connection to be a passive
connection;[[and]]

communicating information using the active connection,
wherein the same network, security, and compression protocols
and parameters are used for information exchange as for the
first connection, while maintaining the passive connection; and
monitoring a predetermined set of parameters corresponding
to one or more characteristics of the opened connections to
determine whether to
open one or more additional connections;
close one or more of the opened connections; and
change the selected active connection as a passive
connection and select one or more of the passive connections as
the active connection.

46. (previously presented) The method of claim 45 in
which the information is communicated in packets that include
aggregated information for more than one application.

47. (previously presented) The method of claim 45 in
which the information comprises a command for a module on the
server; and the method comprises effecting the command by
contacting a remote server, receiving a reply from the remote

Applicant : Frederick William Strahm et al. Attorney's Docket No.: 10559-
Serial No.: 09/811,161 423001 / P10437
Filed : March 16, 2001
Page : 12 of 22

Serial No.: 09/811,161

Filed : March 16, 2001

Page : 12 of 22

server and effecting a response without transmitting the reply to the device.

48. (previously presented) The method of claim 45 that comprises monitoring the connections for a parameter selected from the group consisting of signal strength, transmittal rate, latency, cost of transmittal, and connection integrity.